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## A HISTORY OF RIVER IMPROVEMENT

The advocates of river improvement have come to recognize in recent years that the deepening of the streams involves other betterments. Their plan is not at all simple. It includes a six- or a nine- or a fourteen-foot channel, according to the river in question, a deep waterway from the Lakes to the Gulf, strengthening the levees against floods, reclamation of the overflow lands of the southern Mississippi, conservation of the forests along the watersheds of the streams, conservation of the rich soil which is now washed out to the ocean, and the utilization of water-power whenever that becomes profitable.<sup>1</sup> President Roosevelt, speaking at the Memphis Deep Waterways Convention in 1907, stated the matter briefly as follows: "The Mississippi River and its tributaries ought by all means to be utilized to their utmost possibility."<sup>2</sup> The latest platforms of the leading political parties pledge a vast system of improvement. This, then, is the present program—the fullest use of the rivers of the interior with all that implies.

It goes without saying that this plan is the result of a long evolution. The various elements have been added gradually and only recently, perhaps within the last ten years, has it been recognized that the several items really form a comprehensive system which should be worked out as a whole with due regard to proportion. The question of river improvement has been before the country almost continuously for ninety years. Now, with respect to demands, it has suddenly reached its consummation. Why has it been such a persistent issue? What forces have been involved in the development of the river program? What methods have been employed to bring the matter to the attention of Congress and the nation? Has the government discharged its full duty toward the rivers? These are the principal questions which we shall try to answer.

<sup>1</sup> *Preliminary Report of the United States National Waterways Commission*, Senate Doc. No. 301, 61st Cong., 2d sess., *passim*; House Doc. No. 492, 60th Cong., 1st sess., pp. 16, 17.

<sup>2</sup> *Annals of Amer. Acad. Pol. and Soc. Sci.*, XXXI, 7.

In the first place it should be said that, in whatever form the demand for river betterment was put in the years before the railroads became the competitors of the streams, it was at bottom a demand for a safe and a tolerably constant means of communication. The shippers were satisfied that the steamboat owners were trying to give them fair rates.<sup>1</sup> But the condition of the rivers often caused the charges to be high and uncertain. This was brought about by the dangers and obstructions to navigation. Attention was focused particularly on the removal of snags and bars. This improvement, it was urged, would insure relative safety to the trade; it would bring about a lowering of the rates of insurance which were considered a serious burden; it would reduce the annual losses of life and property; and it would enable the merchants to communicate with New Orleans at almost all seasons of the year.<sup>2</sup> The shippers insisted that if the obstructions were removed they would be satisfied. This could be accomplished with a small annual appropriation.

The coming of the railroads changed the aspect of the problem. It brought about a demand for improvements which could not be satisfied by small expenditures. The railroads soon came to be regarded as the oppressors of the farmers. It was expected that if the rivers were adequately improved they would become the "regulators" of railway rates. River transportation, moreover, was cheaper than that by rail, and low freight rates were imperatively needed to enable the farmers to ship their bulky products to distant markets. Those sections which were touched by the railways were not pleased with their accommodations. Those in which no railroads were built considered themselves neglected. In any case, the improvement of the rivers held out a remedy for their ills. The scope of the demand was greatly increased to answer the new requirements. Since 1860, the call for river improvement has been essentially a demand for a cheap and sure means of transportation.

While the plea was urged originally by the commercial regions

<sup>1</sup> *Commerce and Navigation of the Valley of the Mississippi*. Report prepared for St. Louis delegates at the Chicago River and Harbor Convention, 1847, p. 7.

<sup>2</sup> Senate Doc. No. 185, 28th Cong., 1st sess., p. 2.

of the interior, no opportunity was lost to impress upon the farmer his concern in the matter.<sup>1</sup> The demand, spread over such a large area, was certain to command the votes in Congress needed to pass the appropriation bills. The check upon these growing demands has scarcely ever been found in Congress, but in the executives who have had scruples about signing the acts, partly on constitutional grounds, partly on the basis of expediency.<sup>2</sup> Many of the presidents from Monroe to Buchanan asserted that they were in favor of internal improvements, but they believed that the Constitution stood in the way. After the Civil War the constitutional check became only faintly effective.<sup>3</sup> Thereafter, the appropriations grew to large amounts. The Republican party began its national career with a declaration in favor of such expenditures. Thus the platform of 1856 proclaimed "that appropriations by Congress for the improvement of rivers and harbors of a national character, required for the accommodation and security of our existing commerce, are authorized by the Constitution, and justified by the obligation of the government to protect the lives and property of its citizens."<sup>4</sup> A study of the appropriations from 1865 to the present time shows that this party has handsomely carried out its earliest pledge.<sup>5</sup>

It is convenient to divide the history of river improvement into two periods: the first from 1824 to 1865; the second from 1865 to

<sup>1</sup> *Proceedings of the River Improvement Convention at St. Louis*, 1867, pp. 13, 14; *Annual Statement of Trade and Commerce*, St. Louis, 1872, p. 61; House Report No. 714, 45th Cong., 2d sess., p. 3.

<sup>2</sup> Many evidences could be cited for these statements. A river and harbor bill of 1844 devoted funds to 43 distinct objects (cf. *Cong. Globe*, 28th Cong., 1st sess., XIII, Pt. II, pp. 466, 467). In a veto message of August 3, 1846, President Polk pointed out that the bill contained amounts for at least 40 distinct objects (*Messages and Papers of the Presidents*, IV, 460). A bill of 1870 appropriated \$3,518,000, distributing this sum among 32 states and for 130 public works (*Cong. Globe*, 41st Cong., 2d sess., Appendix, p. 475). Log rolling was openly acknowledged. Thus a member speaking on the bill said: "I will not presume to say . . . that the committee has made the best or most advantageous distribution of the limited amount of moneys which the present financial condition of the country will suffer to be appropriated," etc. President Cleveland, in 1896, vetoed a bill containing 417 items (cf. *Messages and Papers of the Presidents*, IX, 678). The attitude of the presidents before 1860 will be discussed later.

<sup>3</sup> Cf. *infra*.

<sup>4</sup> T. H. McKee, *National Conventions and Platforms*, p. 99.

<sup>5</sup> Cf. *infra*.

the present. Some of the most general features of these periods have been mentioned. It might be added that the years to 1865 were characterized by relatively small appropriations for rivers; by a careful scrutiny of the bills by the presidents; by a growing demand for improvements. During this period, the adherents of the improvement program organized their forces, developed effective means of enforcing their demands, and produced a considerable literature on the subject. By 1860, the people of the interior no longer trusted to the uncertain appeal of their representatives in Congress, nor to the chance memorials sent by various sections, but were organizing great conventions to insist upon the improvements they desired. The assembling of these bodies by 1860 had become almost a matter of routine.

A number of the communities of the interior started on their career as states with an enthusiastic declaration in favor of internal improvements. In the first constitution of Missouri in 1820 it was stated that "Internal improvements shall forever be encouraged by the government of this state, and it shall be the duty of the General Assembly, as soon as may be, to make provision by law for ascertaining the most proper objects of improvement in relation both to roads and navigable rivers. . . ." <sup>1</sup> The constitution of Michigan in 1835, and that of Arkansas in 1836, contain similar provisions.<sup>2</sup> In 1823 a resolution was introduced in the General Assembly of Maryland that that state would "highly approve and zealously co-operate with the general government in adopting such a system of internal improvements as will afford our country the facilities and advantages which nature has placed in our control."<sup>3</sup> Maryland later recommended an amendment to the Constitution which would enable Congress to carry on a system of internal improvements.<sup>4</sup> As early as 1816 the newspapers of the interior urged Congress to improve the streams. "The western waters are our canals," said the *Kentucky Gazette*,<sup>5</sup> "and from

<sup>1</sup> B. P. Poore, *Federal and State Constitutions*, etc. (1877), II, 1112.

<sup>2</sup> *Ibid.*, I, 114, 990.

<sup>3</sup> *Journal of the House of Rep.*, 17th Cong., 2d sess., p. 98 (ed. Gales and Seaton).

<sup>4</sup> *Ibid.*, p. 169.

<sup>5</sup> *Kentucky Gazette* (Lexington), March 25, 1816; cf. also the *Reporter* (Lexington), December 25, 1816; *Western Review* (Lexington), January, 1821.

the simplicity of their wanted improvements are entitled to the first application of moneys and subscriptions from the national treasury."

Congress began to give attention to the rivers of the interior as early as February 15, 1819, when an act was passed "for making a survey of the water courses tributary to and west of the Mississippi. Also, those tributary to and north and west of the Ohio."<sup>1</sup> The appropriation amounted to \$6,500. On April 14, 1820, another act was passed "for making a survey, maps, and charts of the Ohio and Mississippi rivers from the rapids of the Ohio at Louisville to the Balize, for the purpose of facilitating and ascertaining the most practicable mode of improving the navigation of those rivers."<sup>2</sup> But the first act making an appropriation for the actual improvement of the streams was approved May 24, 1824. Seventy-five thousand dollars were devoted to this purpose.<sup>3</sup> The act provided "that for the purpose of improving the navigation of the Mississippi river from the mouth of the Missouri to New Orleans, and of the Ohio river from Pittsburgh to its junction with the Mississippi, the President of the United States is hereby authorized to take prompt and effectual measures for the removal of all trees which may be fixed in the bed of said rivers." For this purpose he was authorized to provide the proper boats, machinery, and force. Congress entertained some doubt as to the possibility of removing the bars and a proviso was, therefore, inserted, "that two experiments shall first be made upon two of the said bars, and if in his judgment they shall be successful, then, and not otherwise, he is hereby authorized to cause improvements to be made upon the remaining bars."<sup>4</sup> Other provisions of the act indicate that it was the intention of Congress to continue the work if these first experiments were successful, for the President was authorized to cause to be laid before Congress at the beginning of each session "a statement of the proceedings under this act, that Congress may be enabled to adopt such further

<sup>1</sup> *Laws of the United States Relating to Improvement of Rivers and Harbors*, House Doc. No. 425, 58th Cong., 3d sess., p. 21.

<sup>2</sup> *Ibid.*, p. 22.

<sup>3</sup> *United States Statutes at Large*, IV, p. 33.

<sup>4</sup> *Ibid.*

measures as may from time to time be necessary under existing circumstances."

The advocates of the bill, while seeking the appropriation in question, were also eager to have the measure pass in order to establish a precedent. This would provide a weapon in the future to combat the constitutional argument which was used effectively by their opponents.<sup>1</sup> On March 3, 1827, Congress authorized an appropriation of \$30,000 to be devoted exclusively to the Ohio, and during the next four years, including 1831, upward of \$395,000 were appropriated for the "improvement of the navigation of the Ohio and Mississippi rivers."<sup>2</sup> Small amounts were granted for the improvement of other rivers. For example, an act of March 2, 1827, devoted \$200 to the Tennessee. Another act of May 23, 1828, devoted \$25,000 to the betterment of the Red River of the South.

From an industrial point of view there was ample justification for these expenditures. The population of the states depending on the Mississippi River system as the only important outlet had grown from about 500,000 in 1800 to about 2,000,000 in 1820, and to 4,000,000 in 1830. At the same time, the commerce of the section was growing to large proportions. This is indicated in a measure by the down freight of the Mississippi arriving at New Orleans. This increased from \$4,371,000 in 1805 to \$9,749,000 for the fiscal year 1815-16, and to \$11,967,000 for 1820-21. The estimate for 1830-31 was \$26,044,000.<sup>3</sup> There is no satisfactory way of estimating the commerce between the various sections of the interior, but there is every reason to believe that it was growing as rapidly as the down-river traffic. Pittsburgh, Cincinnati, Wheeling, Louisville, and St. Louis were thriving industrial towns which were distributing their products over all the inhabited river section. Timothy Pitkin estimated the surplus of Cincinnati in 1833 at \$5,000,000; of Pittsburgh in 1834 at \$4,000,000; of Zanesville at

<sup>1</sup> *Journal of the House*, 17th Cong., 2d sess., p. 92 (ed. Gales and Seaton); *Register of the Debates of Congress*, 19th Cong., 2d sess., III, 498.

<sup>2</sup> Senate Ex. Doc. No. 196, 47th Cong., 1st sess., pp. 247, 256, 257; House Doc. No. 2, 57th Cong., 2d sess., Pt. II, p. 1846.

<sup>3</sup> *Report on Internal Commerce of the United States*, Bureau of Statistics, 1888, *passim*.

\$500,000; and of Wheeling at \$1,000,000.<sup>1</sup> The increase in the number of vessels on the "western waters" gives us some idea of the growth of commerce. Previous to 1817, the whole commerce of New Orleans with the upper country was carried in about twenty barges averaging 100 tons each, making one trip a year. On the upper Ohio there were about 150 keelboats of thirty tons each making about three round trips a year between Pittsburgh and Louisville.<sup>2</sup> The steamboat was introduced on the Ohio in 1811, and by 1829 about 315 boats had been built, of which 181 were running in the latter year.<sup>3</sup> A writer about 1826 asserted that in the spring of the year about 100 vessels a day "have landed at New Madrid [Missouri]. You can name no point on the numerous rivers of the Ohio and the Mississippi from which some of these boats have not come."<sup>4</sup> And about 1838 James Hall wrote: "As the waters rise, trade and navigation are quickened into activity. . . . At this season the spectator who is stationed upon the shore . . . sees these vessels passing in rapid succession—not infrequently several at a time being visible—laden so heavily that the whole hull is immersed."<sup>5</sup> The pioneers insisted that this great commerce was worthy of protection.

The navigation of the rivers was attended with delays and great losses. According to the report of the government engineers, General Bernard and Major Totten, about 1823, the channel of the Ohio between the falls at Louisville and the mouth was crossed by twenty-one bars "which render it impassable by steamboats six months in the year."<sup>6</sup> "The difficulties which embarrass the navigation of the Mississippi," said the report, "arise from the impetuosity of its current, and the almost entire absence of rock on its shore from St. Louis to New Orleans. Hence its constant effort to change its course. . . . These terrible obstacles [snags and planters] have been the cause of much calamity to the people of the West."<sup>7</sup>

<sup>1</sup> Pitkin, *Statistical Review*, pp. 535, 536.

<sup>2</sup> *Cincinnati Directory*, 1829, p. 166.

<sup>3</sup> James Hall, *The West*, p. 13.

<sup>4</sup> T. Flint, *Recollections*, p. 103.

<sup>5</sup> James Hall, *Notes on the Western States*, p. 31.

<sup>6</sup> House Ex. Doc. No. 35, 2d Cong., 17th sess., pp. 34 ff.

<sup>7</sup> *Ibid.*



The committee of the House of Representatives to whom the report was referred declared that "the improvement of the navigation of those two rivers, which wash the territory of twelve states, cannot be a local, but a national object. The task is too herculean for the accomplishment of any one state; and it would be difficult, if not impracticable, to produce co-operation among the different states to make the necessary improvement."<sup>1</sup> Thus were introduced the arguments which were driven home with great force in subsequent debates, namely, the commercial importance of the rivers, the impossibility of concerted action by the states, and the necessity of national action. These were opposed by the argument that Congress, under the Constitution, had no power to act, unless the improvements were clearly national in their scope. The history of this argument will appear later.

Nevertheless, the calls for improvements continued to grow. President Jackson struggled vigorously against the rising tide.<sup>2</sup> He asserted in his message of December 1, 1834, that "in addition to these projects,<sup>3</sup> which had been presented to the two Houses under the sanction and recommendation of the respective committees on Internal Improvements, there were then still pending before the committees, and in memorials to Congress presented but not referred, different projects for works of a similar character, the expense of which cannot be estimated with certainty, but must have exceeded \$100,000,000."<sup>4</sup> An attempt was made to extend the improvements to many of the smaller tributaries of the Ohio and Mississippi. Many of these appropriations were clearly local in character, and Jackson refused to sanction them. But in spite of his vigorous opposition, bills were signed during the last five years of his administration and the first of Van Buren's devoting over \$1,045,000 to the improvement of the Mississippi, Ohio, and Missouri.<sup>5</sup>

No appropriations were made for these rivers from 1839 to 1842.

<sup>1</sup> House Report No. 98, 18th Cong., 1st sess., p. 2.

<sup>2</sup> Cf. *Messages and Papers of the Presidents*, II, 483, 493, 508, 638; III, 118.

<sup>3</sup> Maysville and Lexington turnpike and others.

<sup>4</sup> *Messages and Papers of the Presidents*, III, 120.

<sup>5</sup> Senate Ex. Doc., 47th Cong., 1st sess., pp. 233, 234, 247, 248, 250, 252, 253.

The resistance on the part of the executive only made the interior sections more eager to obtain assistance. About 1842 powerful appeals were issued from Cincinnati, St. Louis, and other places. If allowance is made for "dressing," the Cincinnati Memorial gives an excellent picture of river commerce about 1843. Since the basis of the demand was the industrial importance of the region, let us examine this feature. Once more the down freight of the Mississippi may be taken as one indication of the growth of the internal commerce. The receipts at New Orleans during the fiscal year 1829-30 were valued at \$22,065,000; in 1834-35, at \$37,566,000; in 1839-40, at \$49,763,000; and in 1844-45, at \$57,199,000.<sup>1</sup> According to the Cincinnati Memorial of 1842 the total value of the exports by way of the rivers was \$120,000,000; the imports through New Orleans were estimated at \$50,000,000, making a total of \$170,000,000, which did not include a considerable portion of the local traffic.<sup>2</sup> The years from 1835 to 1845 witnessed a rapid increase in the commerce of St. Louis, and the merchants of that city united with those of Cincinnati in pressing the claim for improvements.<sup>3</sup> Not only was the great importance of the commerce urged as a reason for betterments, but the great loss of life and property constituted an important feature of their argument. It was asserted with truth that the annual loss on the rivers was far greater than the government's annual appropriations; and in addition, there was an indirect loss due to delay, excessive rates of insurance, and uncertain freight charges. Of the total number of steamboats built on "western waters" up to 1826, ninety had been lost or destroyed, and of these twenty-eight had been sunk by snags.<sup>4</sup> In the one year 1838 thirty-seven steamboats were sunk by snags.<sup>5</sup> From one cause or another eighty steamboats were destroyed dur-

<sup>1</sup> *Western Journal and Civilian*, I, 106; *Report on Internal Commerce of the United States* (1888), Bureau of Statistics, *passim*.

<sup>2</sup> Senate Doc. 179, 28th Cong., 1st sess., IV, 14.

<sup>3</sup> The St. Louis Memorial is contained in a document entitled, *Proceedings of the St. Louis Chamber of Commerce in Relation to the Improvement of the Navigation of the Mississippi* (1842).

<sup>4</sup> Drake and Mansfield, *Cincinnati in 1826*, pp. 73, 74; *Cincinnati Directory*, 1829, p. 166.

<sup>5</sup> *Hunt's Merchant's Magazine*, I, 364.

ing this year. In 1839 twenty-one were sunk by snags, and again in 1840 the number was twenty-one.<sup>1</sup> Of the one hundred and twenty-six steamboats registered at St. Louis in 1841 and 1842, sixteen were destroyed by snags.<sup>2</sup>

These were not exceptional years. A committee at St. Louis attempted to estimate the value of property destroyed on the rivers from 1822 to 1841. Their record stands as follows: From 1822 to 1827 the loss of property on the Ohio and Mississippi "due to snags alone," including steam and flatboats and their cargoes, was \$1,362,000. From 1827 to 1832 the loss was \$381,000; from 1833 to 1838, \$640,000, and from 1839 to 1841, \$1,248,000.<sup>3</sup> In many instances, no insurance could be obtained on hulls, and even in the case of the newest and strongest vessels the rate averaged from 12 to 18 per cent.<sup>4</sup> It was often difficult, also, to obtain insurance on cargoes, especially during those periods when the river was falling and when the insurance was desired most. In view of these handicaps the western representatives could urge with great force that Congress was neglecting their commerce. Mr. Bowlin of Missouri declared in the House that "the history of the world presented no example of an amount of destruction of property and loss of life equal to that which yearly occurs upon the rivers of the West."<sup>5</sup> And supported by these facts he thought that "the advocates of the improvement of western navigation came before Congress with strong claims to their favorable attention." The representatives of the interior, at this time, did not fail to point out that the river trade was estimated at over two hundred millions of dollars annually, which amount was scarcely less than the total foreign commerce of the United States. This great point of comparison, it was asserted, "was entirely decisive of the question, whether

<sup>1</sup> Senate Doc. No. 185, 28th Cong., 1st sess., p. 18.

<sup>2</sup> Senate Doc. No. 410, 29th Cong., 1st sess., p. 4.

<sup>3</sup> *Commerce and Navigation of the Valley of the Mississippi* (St. Louis report), 1847, p. 10. E. W. Gould, in *Fifty Years on the Mississippi*, p. 216, gives the following summary of losses from 1810 to 1850: Losses of life from 1810 to 1820, three; from 1820 to 1830, thirty-seven; from 1830 to 1840, one hundred and eighty-four; 1840 to 1850, two hundred and seventy-two; value of tonnage destroyed, \$7,113,940.

<sup>4</sup> Senate Doc. No. 410, 29th Cong., 1st sess., p. 5.

<sup>5</sup> *Cong. Globe*, 28th Cong., 1st sess., XIII, 150.

or not the navigation of the Mississippi is worthy of the special care of Congress."<sup>1</sup>

The committee chosen to report on the Cincinnati and other memorials recommended an appropriation of a million dollars "to remove the fixed obstructions to the safe navigation of the Mississippi and its principal tributaries."<sup>2</sup> But only a small fraction of this amount was actually obtained. By an act of August 23, 1842, Congress appropriated \$100,000 "for building and repairing the necessary boats and for carrying on the improvement of the Mississippi, Missouri, Ohio, and Arkansas rivers."<sup>3</sup> During the years from 1842 to 1847 the amount granted for the betterment of these streams was about \$575,000. No further appropriations were made until 1850.

During the years from 1845 to 1860 new elements entered to complicate the river problem. While the demands were more urgent than ever before, and more systematic, the appropriations were carefully watched by the executives. This was due in part to their unwillingness to permit an increase of expense after the national debt had been increased by the Mexican War. In part it was due to a severer interpretation of the Constitution on the part of several presidents. The total appropriations during these years for general work was about \$130,000, but grants for specific purposes added about \$917,000 to this sum. Of the latter amount \$300,000 were appropriated in 1852 and 1856 for the improvement of the Des Moines rapids, and \$505,000 in 1850, 1852, and 1856 for the survey of the delta and for the improvement of the mouth of the Mississippi.<sup>4</sup> After the President vetoed the appropriations made by the 33d Congress, the Secretary of War, concluding that it was the settled policy of the administration to refuse expenditures for river improvements, disposed of the snag boats and other apparatus.<sup>5</sup>

Nevertheless the matter of internal improvement was becoming

<sup>1</sup> Senate Doc. No. 137, 27th Cong., 3d sess., pp. 3, 4.

<sup>2</sup> *Ibid.*

<sup>3</sup> *Journal of the House*, 27th Cong., 3d sess., p. 392; Senate Ex. Doc. No. 196, pp. 233, 234, 247, 248, 250, 252, 253.

<sup>4</sup> Senate Ex. Doc. No. 196, *loc. cit.*

<sup>5</sup> House Report No. 88, 34th Cong., 1st sess., p. 2.

more and more a great national issue. This is indicated in a measure by the pledges for and against such work which were finding their way into the platforms of the political parties. As early as 1831, the national Republicans, meeting at Baltimore, declared "that a uniform system of internal improvements, sustained and supported by the general government, is calculated to secure, in the highest degree, the harmony, the strength and the permanence of the Republic."<sup>1</sup> The Whig party in 1852 proclaimed "that the Constitution vests in Congress the power to open and repair harbors and remove obstructions from navigable rivers whenever such improvements are necessary for the common defense and for the protection and facility of commerce with foreign nations and among the several states."<sup>2</sup> The platform of the Free Soil Democratic party in 1852 was emphatic in its declaration in favor of internal improvement.<sup>3</sup> The encouraging attitude of the Republicans in 1856 has been referred to. But the Democratic party from 1840 to 1860 declared steadily against the system. They associated with this a declaration in favor of rigid economy.<sup>4</sup> Democratic presidents usually interpreted the pledges strictly. This attitude was entirely consistent with the general principles of the party, since the connection between the tariff, the possible surplus, and internal improvements was clearly seen. Past experience had demonstrated that the demand for improvements was insatiable. It involved the maintenance of what was proclaimed a burdensome system of taxation, and a wasteful administration of the public funds. President Polk expressed this view in his annual message of 1848. "Another branch of this system,"<sup>5</sup> he said, "was a comprehensive system of internal improvements, capable of indefinite enlargement and sufficient to swallow up as many millions annually as could be extracted from the foreign commerce of the country. This was a convenient and necessary adjunct of the protective tariff. It was to be the great absorbent of any surplus which might at any time accumulate in the treasury." The relation between internal improvements and the surplus became more evident after the war, as we shall see later,

<sup>1</sup> McKee, p. 29.

<sup>3</sup> *Ibid.*, p. 85.

<sup>2</sup> *Ibid.*, p. 79.

<sup>4</sup> *Ibid.*, pp. 41, 48, 59, 75, 89.

<sup>5</sup> The "American System"; cf. *Messages and Papers of the Presidents*, IV, 656.

but at that time no effective resistance was encountered on the part of the executives.

Although the presidents from 1845 to 1860 could put a veto on river and harbor bills, they could not hush the demand. The reasons for the appeals continued to be based principally on the industrial importance of the regions of the interior and the handicaps of navigation. The losses, indeed, were larger than ever before. In 1848, fifty-nine steamboats were destroyed. The estimated loss was \$590,000. One hundred and thirty persons lost their lives.<sup>1</sup> In 1849, eighty-three boats were destroyed. The value of vessels and cargoes was estimated at \$1,585,400.<sup>2</sup> The estimated loss for 1855 was \$2,028,945;<sup>3</sup> for 1859, \$1,770,520;<sup>4</sup> and for 1860, \$2,000,000.<sup>5</sup> During the years from 1853 to 1860, upward of 3,000 persons lost their lives as the result of accidents on the "inland waters," and 1,090 persons were injured.<sup>6</sup> Meanwhile, the commerce of the streams increased greatly during the good times before 1857, and this also emphasized the importance of improvements. The southbound commerce of the rivers arriving at New Orleans was valued at \$57,199,000 for the fiscal year 1844-45. It rose to \$96,897,000 in 1849-50, and to \$185,211,000 in 1859-60.<sup>7</sup> The river trade of St. Louis was valued, in 1860, at about \$200,000,000 annually. The same estimate was given at the same date for the river trade of Cincinnati. That of other cities had reached a large figure.<sup>8</sup>

A new element entered into the industrial situation during the years from 1840 to 1860, which made the neglect of the rivers a matter of serious concern. New Orleans, and a considerable portion of the southern section, looked with great apprehension on the diversion of the traffic directly to the East over the lakes and

<sup>1</sup> *Annual Statement of Trade and Commerce*, St. Louis, 1848, p. 15.

<sup>2</sup> *A Review of the Commerce of St. Louis for the Year 1849*, p. 15.

<sup>3</sup> *Hunt's Merchant's Magazine*, XXXV, 242.

<sup>4</sup> *Ibid.*, XLI, 225.

<sup>5</sup> *Fifth Annual Report St. Louis Chamber of Commerce*, 1860, pp. 10, 11.

<sup>6</sup> *Hunt's Merchant's Magazine*, XLIV, 236.

<sup>7</sup> *Report on the Internal Commerce of the United States*, *loc. cit.*

<sup>8</sup> *De Bow's Commercial Review*, XXIX, 782; *Hunt's Merchant's Magazine*, XXV, 485; XLI, 600; House Ex. Doc. No. 79, 39th Cong., 2d sess., p. 93.

canals. The stretching westward of the railroads increased their fears. They dreaded not only the loss of commerce, but the linking of the interests of the East and West and the loosing of the old bonds between the West and South. One of the principal means of holding the two latter sections together and maintaining the old "natural relations," was the improvement of the rivers, including the clearing-out of the mouth of the Mississippi to permit the passage of ocean-going vessels of deep draft. This, it was believed, would keep a large part of the commerce moving southward. St. Louis had a serious problem of its own which it hoped to have solved by the removal of the obstructions at the Des Moines and Rock River rapids.<sup>1</sup> This problem was brought into prominence about 1850 by the prospective extension of railroads from Lake Michigan to the Mississippi. The trade of the upper portion of this river was, therefore, threatened. Unless the rapids were improved so as to prevent the long delays and heavy charges at those points, the trade which formerly came downstream would go eastward by rail. The effort to keep the traffic moving in its old channels and to thwart the diverting influences of the railroads became a great force behind the movement for river betterment. Under this stimulus great conventions were called at various places in the interior, beginning with the one at Memphis in 1845. The magnitude of the problem tended to produce a more effective organization of the adherents of river improvement.

With reference to New Orleans, the difficulties seemed almost insuperable. That city had never been able to handle in a satisfactory manner the growing trade of the interior. As early as 1823 the complaint was heard that "the capital of New Orleans is disproportionate to the quantity of produce landed there. The warmth and unhealthiness of the climate prevents the farmer from sending his produce to that place at a time he may be most in need of the articles for which he would barter. During this time he is, at present, completely deprived of a market for his produce, and is, moreover, obliged to pay the merchants an exorbitant price for

<sup>1</sup> *Hunt's Merchant's Magazine*, XV, 170; XVI, 115; XXVIII, 420; *Annual Review of the Trade and Commerce of St. Louis*, 1848, p. 2; House Report No. 69, 34th Cong., 1st sess., p. 45; *Proceedings of the River Improvement Convention*, St. Louis, 1867, p. 39.

his necessities." "New Orleans," continues this author, "is at all times a very uncertain market. It not infrequently happens that a few boat loads of produce completely supply the demand. If another cargo then arrives, the owner is obliged either to sacrifice it or leave it in store. In the latter case, if it consists of flour or bacon, it suffers much from the heat and humidity of the climate and its value is not infrequently diminished one-half or three-fourths."<sup>1</sup> Even at this early date the merchants of the up-river regions were looking forward to the opportunity of communicating directly with the East by the canals then in prospect.<sup>2</sup>

The commercial facilities of the southern city did not grow so rapidly as the increasing commerce, and its shortcomings came to be more keenly felt. "The disadvantages that New Orleans now labors under," said a southern journal about 1846, "are disadvantages that no commercial city of the United States has to contend with."<sup>3</sup> Among these were the injuries to which produce was subject after it reached the wharves of the city; the greater expense of shipping to the East by the southern route; the want of conveniences for handling freight; and the risks involved in the navigation of the Ohio and Mississippi rivers. About 1847, the freight on a barrel of flour from Cincinnati to New York through the canals was \$1.35. By way of Pittsburgh the charge was \$1.40. By the southern route it was \$1.38, but the added allowance for risk and damage frequently brought the total amount to \$1.75.<sup>4</sup>

To assist in the solution of these problems, and at the same time to impress upon Congress the importance of the improvements desired, the southern and western states now resorted to the device of commercial conventions. Among the earliest of these were the Memphis convention of 1845; the Chicago river and harbor convention of 1847;<sup>5</sup> the Burlington convention of 1851;<sup>6</sup> and several

<sup>1</sup> L. C. Beck, *Gazetteer of Illinois and Missouri*, p. 33.

<sup>2</sup> *Ibid.*, p. 35; House Report No. 98, 18th Cong., 1st sess., p. 4.

<sup>3</sup> *De Bow's Commercial Review*, III, 105.

<sup>4</sup> Eighth Census of the United States, Agriculture, clvii; *De Bow's Commercial Review*, III, 103; XI, 77, 387; *Hunt's Merchant's Magazine*, XIX, 582; XXXV, 148.

<sup>5</sup> Cf. Memorial of the Chicago River and Harbor Convention (Chicago).

<sup>6</sup> Proceedings reported in *Missouri Republican*, October 15 and 24, 1851.



conferences held at New Orleans, notably the southern and western railway convention in 1852. The Memphis convention was one of the first assemblies called in the interior to consider commercial matters. After a preliminary meeting in July the large convention assembled in November. Twelve states were represented by some five hundred members. John C. Calhoun, the president, threw his great influence on the side of river improvement. He asserted that while he did not believe in the power of the general government to conduct a system of improvements, he did not for a moment question the right of the United States to appropriate money for the Mississippi, "the great inland sea of the country"; and that the government was as much obligated to protect, defend, and improve this river in every particular as it was to conduct these operations on the Atlantic seaboard.<sup>1</sup> Resolutions were adopted calling for the improvement of the Ohio and Mississippi and their tributaries; for the deepening of the mouth of the Mississippi; for the connection of the Mississippi River and the lakes by means of a ship canal, and for the improvement of the river at St. Louis.<sup>2</sup> Similar resolutions were adopted at other conventions, except that the assemblies north of St. Louis were often called more especially to secure the improvement of the rapids of the Mississippi. The railway convention at New Orleans proposed a new solution to the problem of diverted traffic, namely, a railroad to connect New Orleans with the producing regions of the West and Southwest.<sup>3</sup>

In April, 1856, the matter of river improvement was taken up vigorously in Congress. A committee reported that "It is, in the opinion of this committee, high time that a more just and liberal system was inaugurated. . . . The subject is not second in importance to any. . . . From the very nature of things the proper work to benefit the navigation of the rivers traversing a large extent of country and forming the boundaries of various states cannot be carried on by the states. Proper concert of action cannot be effected."<sup>4</sup> The committee recommended the improvement of the Mississippi from Balize to the Des Moines rapids, urging an

<sup>1</sup> *De Bow's Commercial Review*, I, 14.

<sup>2</sup> *Ibid.*, p. 18.

<sup>3</sup> *Ibid.*, XII, 310.

<sup>4</sup> House Report No. 88, 34th Cong., 1st sess., p. 2.

appropriation of \$225,000 a year for that purpose; also \$65,000 for the Missouri, \$60,000 for the Ohio, and \$55,000 for the Arkansas.<sup>1</sup> We have already indicated the success of these various demands.

Since the presidential check has played such an important part in restricting appropriations it is important to review briefly the opinions of the executives.

Many of the early presidents actually favored internal improvements, but did their duty to the Constitution as they interpreted it. Jefferson discussed this matter in his annual message of 1806. He looked forward to the time when the public debt would be reduced and the disposal of the surplus would become an issue. "The question, therefore, now comes forward, To what other objects shall these surpluses be appropriated? . . . Shall we suppress the impost and give that advantage to foreign over domestic manufactures? . . . Their patriotism would certainly prefer its continuance and application to the great purposes of public education, roads, rivers, canals, and such other objects of public improvement as it may be thought proper to add to the constitutional enumeration of federal powers. By these operations new channels of communication will be opened between the states, the lines of separation will disappear, their interests will be identified, and their union cemented by new and indissoluble ties."<sup>2</sup> But Jefferson, like several of his successors, believed that the Constitution would have to be amended to accomplish these objects.

Madison's statements, although guarded, indicate a friendly attitude. He announced his policy in his first inaugural: "To promote by authorized means improvements friendly to agriculture, to manufacture, and to external as well as internal commerce."<sup>3</sup>

Monroe, also, expressed himself in favor of internal improvements. In his message of May 4, 1822, vetoing the Cumberland Road bill, he said: "It is with deep regret, approving as I do the policy, that I am compelled to object to its passage."<sup>4</sup> He accepted the doctrine that the power of Congress to raise revenue was unlimited, but that the execution of improvements was limited in

<sup>1</sup> House Report No. 88, 34th Cong., 1st sess., pp. 2, 9, 10.

<sup>2</sup> *Messages and Papers of the Presidents*, I, 409, 410.

<sup>3</sup> *Ibid.*, I, 468.

<sup>4</sup> *Ibid.*, II, 142.

many cases by the consent of the states.<sup>1</sup> It was through this loophole that some of the early appropriations were forced. The consent of the states was, of course, assumed.<sup>2</sup>

Adams took a broader view of his constitutional powers than his predecessors.<sup>3</sup> But Jackson seriously objected to the growing demands, although he declared that he was "sincerely friendly to the improvement of our country by means of roads and canals."<sup>4</sup> He adopted a rather artificial rule that appropriations for rivers above a port of entry were local and not national and, therefore, not within the scope of the powers of Congress. But he took the ground that the improvement of harbors and the removal of partial obstructions from the navigable rivers "for the facility and security of our foreign commerce have always been regarded as standing upon different grounds."<sup>5</sup> Upon this basis he sanctioned a number of appropriations for the Ohio and Mississippi.

Tyler and Polk used the veto power freely, where the appropriations appeared to them to be local in character. But they placed the Mississippi on a different footing from the other streams, "since it belongs to no particular state or states, but of common right, by express reservation to all the states."<sup>6</sup>

Fillmore declared in his first annual message that he entertained "no doubt of the authority of Congress to make appropriations for leading objects in that class of public works comprising what are usually called internal improvements."<sup>7</sup> He mentioned the Mississippi as especially worthy of attention. Pierce, however, applied a strict constitutional interpretation to the bills. He believed that if Congress established the principle of letting the states take the initiative the burden of improvement would soon be removed from the general government.<sup>8</sup> Buchanan, also, applied the constitutional test strictly to river and harbor bills.

We may conclude that during the years before 1860 the Constitution offered the principal check upon the growing demands for

<sup>1</sup> *Ibid.*, p. 167, and Polk's comment on this message, IV, 610-26.

<sup>2</sup> *Ibid.*, and Clay's speech, *Debates of Congress* (1856), 18th Cong., 1st sess., pp. 1022-24.

<sup>3</sup> *Messages and Papers of the Presidents*, II, 311.

<sup>4</sup> *Ibid.*, II, 484, 492, 509, 639.

<sup>5</sup> *Ibid.*, III, 121.

<sup>7</sup> *Ibid.*, V, 90, 91.

<sup>6</sup> *Ibid.*, III, 332, 461, 610-26.

<sup>8</sup> *Ibid.*, V, 219, 386, 387, 388.

internal improvements. Jefferson, Madison, Monroe, Jackson, and Polk favored an amendment which would enable Congress to carry on such work. In general, the presidents tried to distinguish between local and general, state and national, but found difficulty in adopting any definite rule. The improvement of the Mississippi and Ohio was generally regarded by the executives as a national enterprise, and therefore in a different category from the other streams.

With regard to the latter interpretation it is difficult to see how any other view could have been taken. The "Mississippi River, and the navigable rivers and waters leading into the same, or into the Gulf of Mexico" were declared by a number of acts of Congress "common highways, and forever free as well to the inhabitants of said state as to other citizens of the United States, without tax, duty, impost, or toll therefor imposed by the said state." This clause was embodied in the enabling act of Louisiana approved February 20, 1811, and similar provisions occur in the enabling acts of Missouri, Iowa, Minnesota, and Wisconsin.<sup>1</sup> The Ordinance of 1787 contains nearly the same regulations for the Mississippi and St. Lawrence.<sup>2</sup> The navigable portion of the Mississippi River system was thus nationalized by acts of Congress, and if the presidents regarded these acts as valid they were amply justified in sanctioning a rather general system of river improvement.<sup>3</sup> But generally they were disposed to accept the stricter view, and thus the appropriations were kept down to a remarkably small figure. The total amount devoted to the Mississippi, Missouri, Ohio, and Arkansas from 1824 to 1860 was about \$3,130,000.<sup>4</sup> The total

<sup>1</sup> Poore, I, 331; II, 1027, 1102, 2026.

<sup>2</sup> *Ibid.*

<sup>3</sup> This argument was urged at length in the Memorial of the Chicago River and Harbor Convention. President Polk, also, probably had these limitations in mind in his discussions of the powers of Congress. Cf. *Messages and Papers of the Presidents*, IV, 610-26.

<sup>4</sup> The figures given by different government reports do not agree. The above estimates are taken from Senate Ex. Doc. No. 196, 47th Cong., 1st sess., pp. 233, 234, 247, 248, 250, 252, 253, and House Document No. 2, 57th Cong., 2d sess., Pt. II, p. 1846. The amount above named was distributed as follows: Missouri, \$40,000; Ohio, \$406,400; Mississippi, \$1,284,500; Mississippi and Missouri, \$100,000; Mississippi and Ohio, \$677,700; Mississippi, Missouri, and Ohio, \$223,000; Mississippi, Missouri, Ohio, and Arkansas, \$400,000.

amount, therefore, for the four streams for thirty-seven years does not greatly exceed the average annual appropriation for the Mississippi alone since 1880.<sup>1</sup> The total sum granted for rivers and harbors from 1822 to 1860 was about \$14,700,000.

With respect to the magnitude of the appropriations, the scope of the river work, and the presidential views in regard to the Constitution, the periods before and after 1865 stand in marked contrast. Before we consider these matters in detail let us outline the forces behind the demand for river improvement since the date above named.

Among the leading elements were the widening of the sphere of interest with the spread of population in the agricultural lands of the West and Northwest; the demand for cheap transportation; the desire to find some satisfactory "regulator" of railway rates; the rising influence of the interior in Congress; the frequent surpluses in the national treasury; and the liberal views of the great political parties. The great floods and the scientific study of the problems of conservation of the national resources have added new elements to the program of improvement. The decline in the importance of the rivers has tended to stimulate interest in the matter of improvement. Before 1860 it was insisted that the rivers should be improved because they were the most important means of transportation; now the insistence is based partially on the fear that they will lose their present importance. Meanwhile, the demand has become far more comprehensive, and at the same time the work is executed with more system than before 1860.

After the friendly declarations of 1856 and 1860 the platforms of the Republican party have usually been mute on the matter of improvement.<sup>2</sup> But the silence has spoken loudly with action. The Democratic platform of 1884 pledged that "the federal government should care for and improve the Mississippi and other great waterways of the Republic, so as to secure for the interior states easy and cheap transportation to tide water."<sup>3</sup> The platform of 1892 enlarged on this declaration with the statement that "when

<sup>1</sup> Cf. *Annual Report Mississippi River Commission*, 1910, pp. 2941, 2942.

<sup>2</sup> McKee, pp. 99, 115. The matter was referred to in the platform of 1880; cf. McKee, p. 188.

<sup>3</sup> *Ibid.*, p. 207.

any waterway of the Republic is of sufficient importance to demand the aid of the government such aid should be extended with a definite plan of continuous work until permanent improvement is secured."<sup>1</sup>

This was a marked advance over the most liberal expressions before 1865. But the party platforms of 1912 have gone far beyond the ideas expressed in the one last quoted. Here the program, as far as demands go, is probably presented in its final stage. Said the Democratic platform of 1912: "We favor the adoption of a liberal and comprehensive plan for the development<sup>2</sup> and improvement of our inland waterways with economy and efficiency, so as to permit their navigation by vessels of standard draft."<sup>3</sup> The platform then defines at some length what the plan is. It includes "the conservation of our national resources and the development of our waterways"; "the regulation of river flow by additional bank and levee protection below, and the diversion, storage, and control of the flood waters above, and their utilization for beneficial purposes in the reclamation of arid and swamp lands, and the development of water power, instead of permitting the floods to continue, as heretofore, agents of destruction." Here the various elements are joined together in a comprehensive program and stated as a great national issue.<sup>4</sup> In the platform of the Progressive party we find a similar declaration with the appended statement that the equipment used in building the Panama Canal should be employed in constructing a Lakes-to-the-Gulf deep waterway. The political parties since the war, therefore, have recommended, in more and more liberal terms, a system of internal improvements.

It is hardly to be expected that presidents elected under such conditions would offer any great resistance to the growing demands for betterments. Although the appropriations were reaching large proportions, scarcely any objection was raised by the executives until Arthur, in 1882, vetoed a bill including large appropriations

<sup>1</sup> McKee, p. 267.

<sup>2</sup> If space permitted it would be interesting to trace this idea of development. Some of the earlier statements pledge appropriations only where commerce already "existed."

<sup>3</sup> From the platform as quoted in the daily newspapers.

<sup>4</sup> Cf. *supra*, p. 630.

for rivers and harbors. His principal objection to the bill was that it contained appropriations "for purposes not for the common defense or general welfare and which do not promote commerce among the states. These provisions, on the contrary, are entirely for the benefit of the particular localities in which it is proposed to make improvements."<sup>1</sup> He added that "the duty devolves on me to withhold my signature from a bill which contains appropriations which, in my opinion, greatly exceed in amount the needs of the country for the present fiscal year. The extravagant expenditure of public money is an evil. . . ." President Arthur also criticized the practice of grouping a large number of items in one bill, and the plan, sometimes employed, of including amounts for rivers and harbors in general appropriation bills.<sup>2</sup>

In 1896, President Cleveland vetoed a river and harbor bill. The act appropriated upward of \$14,000,000 to be applied to 417 separate objects. "A more startling feature of the bill," according to the President, was "its authorization of contracts for river and harbor work amounting to \$62,000,000."<sup>3</sup> He asserted that "many of the objects for which it appropriates public money are not related to the public welfare, and many of them are palpably for the benefit of limited localities or in aid of individual interests."

While the bills during this period involved large sums, there were only a few vetoes. These were based principally on the ground of expediency. With the political parties generally favoring an extensive system of improvements, and with the presidents taking a wide view of their powers, the appropriations were sure to grow by leaps and bounds.

Immediately after the war memorials began to pour into Congress calling for improvements of various descriptions.<sup>4</sup> The convention plan was revived and an assembly of this sort was an annual

<sup>1</sup> House Ex. Doc. No. 222, 47th Cong., 1st sess., p. 1. Grant, in 1876, expressed his disapproval of several bills; cf. *Messages and Papers of the Presidents*, VII, 377, 408; also VIII, 95.

<sup>2</sup> *Messages and Papers of the Presidents*, VIII, 138.

<sup>3</sup> *Ibid.*, IX, 678.

<sup>4</sup> Cf. of the 1st and 2d sessions of the 39th Congress alone, Senate Misc. Doc. Nos. 45, 54, 65; Senate Ex. Doc. No. 22; Senate Report No. 126; House Misc. Doc. Nos. 46, 80, 98; House Ex. Doc. No. 58; House Report No. 20.

occurrence in the interior. Such conventions were held at Dubuque in 1864; at Keokuk in 1867; at Prairie du Chien in 1868; at New Orleans in 1869, 1875, 1876, and 1880; at St. Louis in 1867, 1872, 1873, and 1881; at Vicksburg in 1875; at St. Paul in 1875 and 1877; at Quincy in 1879; and at Davenport in 1881.

The St. Louis convention of 1873 was an unusual assembly. It was composed not of delegates from the states, but of congressmen and governors. At least twenty states were represented. The object of the convention was announced by Mayor Brown, of St. Louis, as follows: "We have designated this assembly a convention, but in character it is merely an informal and friendly conference. We desire to submit a plain, practical exhibit of the needs of the West and South for improved water lines to the ocean."<sup>1</sup> Memorials were sent from all these assemblies praying for immediate and extensive improvement of the Mississippi and its tributaries.

These bodies, meeting at random, have in recent years given place to several large permanent organizations, like the National River and Harbor Convention, whose purpose it is to unite the movement and to direct attention systematically to river improvement. This marks the culmination of the marshaling of the forces in favor of river betterment.

As we have seen, one of the important elements in the development of the river program was the rising power of the interior. "An estimate of the political power of these states," said the report of a congressional committee in 1878, "shows how national are the interests attaching to the rivers. Of the 301 representatives of the people in the present Congress, the eighteen states and two territories sent 171."<sup>2</sup> Of the 11 members of the Committee on Commerce of the House in the 41st Congress, 5 were representatives from the interior.<sup>3</sup> "Not a single member of that committee," it was urged in debate, "resides in any state upon the Atlantic seaboard, except New York, Rhode Island, and Louisiana. The East and the West are largely represented. It is not surprising, therefore, that

<sup>1</sup> *St. Louis Democrat*, May 14 and 15, 1873.

<sup>2</sup> House Report No. 714, 45th Cong., 2d sess., p. 5.

<sup>3</sup> *Cong. Globe*, 41st Cong., 2d sess., p. 5257.



the appropriations should be confined to the states from which this committee comes.”<sup>1</sup>

Meanwhile, the national treasury was often burdened with a surplus over expenditures. The balances reached a considerable figure in the years from 1866 to 1880; but during the decade to 1890 the annual surplus often amounted to over one hundred million dollars. The national debt had been reduced from \$1,996,000,000 in 1879 to \$891,000,000 in 1890; the interest charges were reduced.<sup>2</sup> The revenue was in excess of the ordinary needs of the government. How was the surplus to be disposed of without seriously disturbing the existing tariff? The advocates of the river improvement program urged that it be spent in bettering navigation. “Can there be a more propitious time,” said the memorialists of the St. Louis convention in 1881, “for the national legislature to recognize the value and importance of the work? The report of the Secretary of the Treasury, favorably presented by President Arthur in his message, shows a surplus revenue of over \$100,000,000 for the last fiscal year, and the question suggests itself, ‘how can this accruing surplus be profitably and most beneficially expended?’ Those for whom we speak do not complain of the burdens of taxation. They do not ask for the present reduction or speedy extinguishment of the national debt, but they do ask that this surplus shall be applied in part to their great and cheap thoroughfares.”<sup>3</sup> A similar argument was heard in Congress. Mr. O. D. Conger, of Michigan, said in 1870: “I am firm in the belief, Mr. Speaker, that every dollar which the government spends judiciously in giving security to shipping, in enlarging and multiplying the channels and routes of transportation and travel, in opening new ways of communication by land and water is not only returned fourfold to the producer, the farmer, the lumberman, the artisan, and the consumer, but adds vastly to the material wealth and vital prosperity of the nation at large.”<sup>4</sup> Others, also, urged that the wisest policy was to spend the accruing funds on national development.

<sup>1</sup> *Ibid.*, p. 5275.

<sup>2</sup> Dewey, *Financial History of the United States*, pp. 401, 429, 431.

<sup>3</sup> *Official Report of the River and Harbor Convention*, St. Louis, 1881, pp. 237, 238.

<sup>4</sup> *Cong. Globe*, 41st Cong., 2d sess., Appendix, p. 477.

The granger movement which stirred the interior during a portion of the decade from 1870 to 1880 added momentum to the demand for river improvement. One of the objects of the Patrons of Husbandry was to secure redress for the farmers for their grievances against the railroads. It was constantly urged that river transportation was cheaper than that by rail. If the obstacles which beset this trade were removed, traffic would take to the rivers in greater volume; the waterways would force the rail rates to lower levels, and the saving to the farmers would be immense.<sup>1</sup> Testimony was not wanting to show that at certain periods the railroads were greatly influenced by river competition. Mr. Murdock, president of the Mobile & Ohio, testified before the Windom commission in 1873 that "the river line is the hardest thing to fight I have ever struck yet, particularly in good weather and when the river is up; but when we catch them with low water or an ice gorge we turn the tables on them."<sup>2</sup> The representatives of the interior urged such improvements as would make the rivers constant competitors of the railroads.<sup>3</sup> In this connection, Mr. Finkelnberg, of Missouri, declared in Congress, "The people everywhere demand cheap water transportation. It is the great demand of the day. Oppressive railway tariffs have demonstrated the folly of longer neglecting the improvement of those magnificent water courses with which nature has so bountifully blessed our country."<sup>4</sup> Great pressure was, meanwhile, brought to bear upon the Committee on Commerce in the House. Mr. Conger probably did not overstate the case when he said: "They [the committee] have been subject from day to day to the urgency of zealous senators and watchful representatives, whose patriotic vision, like the 'eye of one who slumbers not nor sleeps,' has watched with commendable keenness over the interests of their trusting constituencies."<sup>5</sup>

<sup>1</sup> House Ex. Doc. No. 79, 39th Cong., 2d sess., p. 92; *Proceedings of the River Improvement Convention*, St. Louis, 1867, pp. 26, 38; *Annual Statement of Trade and Commerce of St. Louis*, 1872, p. 29.

<sup>2</sup> *Report of the Windom Commission*, p. 236.

<sup>3</sup> *St. Louis Democrat*, July 11, 19, 21, 26, 31, 1873.

<sup>4</sup> *Cong. Globe*, 41st Cong., 2d sess., Appendix, p. 494.

<sup>5</sup> *Ibid.*, p. 475.

The effect of these various influences is seen in the appropriations obtained from Congress. By an act of June 23, 1866, \$550,000 were granted for the improvement of the Mississippi, Missouri, Ohio, and Arkansas; also, \$200,000 for the Des Moines rapids. In 1867, \$100,000 were granted for the improvement of the Ohio River, and in 1870, \$250,000 for the improvement of the falls at Louisville. About 1870 Congress inaugurated an extensive system of betterments of the Mississippi from the Falls of St. Anthony to the mouth of the river, expending during the decade a number of million dollars on the work. The Ohio and Missouri, also, received liberal grants. Over a million dollars were devoted to the latter stream alone, during the years from 1878 to 1881.<sup>1</sup> The extent to which Congress and the executives yielded to the new demands is witnessed by the magnitude of the appropriations. From 1866 to 1882 grants for the Ohio, Mississippi, Missouri, and Arkansas amounted to about \$25,000,000. From 1882 to 1910, inclusive, the appropriations for the Mississippi have amounted to \$61,704,000;<sup>2</sup> appropriations for the Ohio, from 1882 to 1909, have been \$4,587,000;<sup>3</sup> and for the Missouri, to 1905, \$9,259,000.<sup>4</sup> Other streams, such as the Tennessee, Cumberland, Illinois, Wisconsin, and Kanawha, have received large appropriations.<sup>5</sup>

In 1879 Congress took a most important step in the development of the river work. In that year the Mississippi River Commission was created. Prior to that date appropriations were made for one object or another with scarcely any reference to the improvement of the system as a unit. What the commission was expected to accomplish was explained by Mr. Gibson, of Louisiana, who introduced the bill. "This commission is created with the hope that

<sup>1</sup> Senate Ex. Doc. No. 196, *loc. cit.*

<sup>2</sup> *Annual Report of the Mississippi River Commission*, 1910, Appendix PPP, pp. 2941, 2942.

<sup>3</sup> *Annual Report, Chief of Engineers, United States Army*, 1909, Pt. II, Appendix DD, p. 1733. The appropriations for the Louisville and Portland canal not included in the figures since 1866, nor the allotments.

<sup>4</sup> *Ibid.*, Appendix AA, p. 1667, includes appropriations and allotments.

<sup>5</sup> The total expenditures for rivers and harbors from 1896 to 1910 inclusive were \$325,333,000. Cf. Senate Report No. 1025, 61st Cong., 3d sess.

they may devise some plan, economical, feasible, and complete, that shall give us deep water at all seasons of the year and prevent these destructive floods so ruinous, not only to the country through which they flow, but to the mighty commerce that carries the productions of the millions who inhabit the great valley."<sup>1</sup> In this and further remarks of Mr. Gibson and others we have a foreshadowing of the idea of the comprehensive program which prevails today.

The act creating the commission was approved June 28, 1879.<sup>2</sup> Section two provides for the appointment of seven commissioners, "three from the engineer corps of the army, one from the Coast and Geodetic Survey, and three from civil life, two of whom shall be civil engineers." Section four provided that "It shall be the duty of said commission to take into consideration and mature such plans and estimates as will correct, permanently locate, and deepen the channel, and protect the banks of the Mississippi River; improve and give safety and ease to the navigation thereof; prevent destructive floods; promote and facilitate commerce, trade and postal service; and when so prepared and matured to submit to the secretary of war a full and detailed report of their proceedings and actions, and of such plans with estimates of the cost thereof. . . ."<sup>3</sup>

The annual reports of the commission contain, in addition to a statement of its work, recommendations for future improvements. These are based on previous surveys and inspections. The present policy, therefore, of making improvements under the supervision of a commission after a previous investigation, is a great improvement over the old random method which prevailed before 1879. The Missouri River Commission was created by act of Congress July 5, 1884.<sup>4</sup> Its purpose was similar to that of the Mississippi body. This commission, however, was dissolved in 1902 because the declining commerce of the Missouri River did not seem to warrant its continuance.

The plan for the improvement of the Ohio has experienced a great development since the resumption of appropriations in 1866.

<sup>1</sup> *Cong. Record*, 46th Cong., 1st sess., IX, Pt. II, 2282.

<sup>2</sup> *United States Statutes at Large*, XXI, 37, 38.

<sup>3</sup> *Ibid.*, XXXI, 37, 38.

<sup>4</sup> Senate Report No. 527, 61st Cong., 2d sess., p. 602.

About that time a minimum three-foot channel was all that was desired. As early as 1872, a board of engineers was appointed to report upon the applicability of certain plans for movable hydraulic gates for chutes and locks. In 1875, Major Merrill, of the United States Engineers, expressed himself in favor of the movable dam system throughout the entire river.<sup>1</sup> An act of Congress, March 3, 1875, appropriated \$100,000 "to be used for and applied toward the construction of a movable dam, or a dam with adjustable gates for the purpose of testing substantially the best method of improving permanently the navigation of the Ohio River and its tributaries." The River and Harbor act of August 11, 1881, directed the appointment of a board to report upon the feasibility of improving the Ohio below Pittsburgh by means of movable dams. The report was favorable to this plan, and the first appropriation was made for the work in 1890.<sup>2</sup> Subsequent acts have called for further surveys and improvements.<sup>3</sup> The River and Harbor act of March 3, 1905, called for the appointment of a board of engineers to inspect the Ohio River with a view to the radical improvement of the stream, and with the hope of obtaining a six- or a nine-foot channel. Thus the program has developed into a plan of canalizing the whole river. The deep-waterway program as it appears today includes a nine-foot channel from Pittsburgh to Cairo; six feet of water from St. Paul to St. Louis; six feet in the Missouri from possibly Sioux City to St. Louis; and fourteen feet from the Lakes to the Gulf.

The advocates of this extensive system of improvements find support for their proposition in many recent developments. The opinion prevails in some quarters that the rivers have been objects of unfair competition,<sup>4</sup> and that if harmonious relations could be established between river and rail lines the river trade would grow.<sup>5</sup> It is urged that the local packet lines on the Ohio are carrying

<sup>1</sup> House Doc. No. 492, 60th Cong., 1st sess., p. 1.

<sup>2</sup> House Doc. No. 492, 60th Cong., 1st sess., pp. 1-9; House Doc. No. 2, 57th Cong., 2d sess., p. 1869.

<sup>3</sup> June 3, 1896; March 3, 1899; June 13, 1902; March 3, 1905; June 30, 1906.

<sup>4</sup> *Bulletin Amer. Econ. Assn.*, Fourth Series, No. 2, pp. 155-62.

<sup>5</sup> Senate Doc. No. 301, 61st Cong., 2d sess., p. 10.

freight at a profit in spite of their handicaps.<sup>1</sup> For some classes of freight, transportation by river is asserted to be far more satisfactory than that by rail, and to result in prompter deliveries and lower rates.<sup>2</sup> The old argument still prevails that cheap river transportation is admirably suited for the bulky products of the interior.<sup>3</sup> Lower rates would result in a saving of millions of dollars annually to farmers and others. It is added that in prosperous times railway traffic is congested,<sup>4</sup> and that the time has now arrived for the development of the waterways as at least an adjunct to the railways. It is believed that if the shippers understood that it was to be the policy of the government to grant the desired improvements the proper river terminals would be built. The success of the jetties in maintaining deep water at the mouth of the Mississippi has been urged for some years as a reason for further improvement, possibly with the hope of connecting an extensive foreign trade with the river ports.<sup>5</sup> The prospective trade through the Panama Canal adds further weight to the argument.

It is recognized, of course, that the cost of the desired improvements will be very great. The Trans-Mississippi Commercial Congress at Muskogee in 1907 adopted as a slogan: "An annual appropriation of at least \$50,000,000 for rivers and harbors."<sup>6</sup> And it was announced that "it is the sense of this congress that it is desirable that the government shall issue its 2 per cent bonds to the extent of \$500,000,000 more to carry forward the work which has already been approved by the engineers of the army." Nothing further is needed to indicate the proportions to which the demands have now grown.

It should be said that there are good indications of a revival of interest in the rivers on the part of the shippers. At Memphis, the Illinois Central Railroad has recently placed in operation, adjacent

<sup>1</sup> House Doc. No. 492, 60th Cong., 1st sess., pp. 16-18; extract *Report of Interstate Commerce Commission*, 1904, Appendix, No. 5, p. 58.

<sup>2</sup> *Ibid.*

<sup>3</sup> *Annals of Amer. Acad. Pol. and Soc. Sci.*, XXXI, p. 7.

<sup>4</sup> *Annual Report of Mississippi River Comm.*, 1910, p. 2976.

<sup>5</sup> Memorial St. Louis Merchants Ex., 1892, p. 33.

<sup>6</sup> Senate Doc. No. 101, 60th Cong., 1st sess., pp. 1-7.

to their freight yards, a telpherage system for the rapid and economical transfer of cargoes from and to the barges in the river.<sup>1</sup> At New Orleans have been constructed "magnificent and spacious docks and wharves with their steel sheds, loading cranes, moving platforms, railroad trackage, etc."<sup>2</sup> In the same connection the following statement appears in the last report of the Cincinnati Chamber of Commerce: "Owing to a good stage of water throughout the year river conditions were very satisfactory. A considerably increased traffic is indicated, and a large use of the river by shippers in the Ohio Valley is reported. With the policy of the government to keep up the work of improving the river clearly defined, there is greater activity in boat-building, and inquiries are being made by investors as to the feasibility of establishing new lines of boats for freight and passenger trade."<sup>3</sup>

Several of the elements which now form a part of the comprehensive plan of improvement were added years ago. Levee work, indeed, antedates the bettering of the channels.<sup>4</sup> It now absorbs a considerable part of the funds devoted to the Mississippi River. For example, of the \$63,514,000 appropriated from 1879 to 1910, \$24,753,000 were consumed in levee construction and repair. Some of the states along the southern Mississippi have for years co-operated with the federal government in this work.<sup>5</sup>

The association of river improvement and reclamation of swamp and overflow lands dates back at least to the great floods of 1828, 1844, and 1849. With the settlement by American immigrants of Louisiana and Mississippi and with the success of cotton and sugar planting, the demands for reclamation received a considerable stimulus. The demand has been urged periodically since that time.<sup>6</sup>

<sup>1</sup> *Annual Report of Mississippi River Comm.*, 1910, p. 2976.

<sup>2</sup> *Ibid.*

<sup>3</sup> *Sixty-fourth Annual Report of the Cincinnati Chamber of Commerce* (1912), p. 84.

<sup>4</sup> Cf. *Hearings before the Committee on Commerce, United States Senate* (1890), *passim*.

<sup>5</sup> During the years from 1833-61 Louisiana expended \$1,654,700; and from 1865-82 local levee districts in Louisiana, Mississippi, and Arkansas spent \$21,979,000. Cf. *Hearings before the Committee on Commerce, United States Senate* (1890), p. 89; and E. W. Gould, p. 329.

<sup>6</sup> *Messages and Papers of the Presidents*, VIII, 96.

The petitions have become more urgent at the present time because of the limited amount of land now at the disposal of the government.

The most recent additions to the program of improvement are the demands for flood control by large reservoirs along the upper courses of the streams, and the conservation of the forests about the water-sheds. And this naturally suggests another addition to the system, namely, the use of the water thus held behind dams, or in reservoirs, for the purposes of power.<sup>1</sup> The comprehensive program as it is presented today may be summarized as follows: "Citizens of all portions of the country are coming to realize that, however important the improvement of navigation may be, it is only one of the many ends to be kept in view. The demand for navigation is hardly more pressing than the demands for reclaiming lands by irrigation in the arid regions, and by drainage in the humid lowlands, or by utilizing water-power now running to waste, or for purifying the water so as to reduce or remove the tax of soil waste, to promote manufactures and to safeguard life."<sup>2</sup>

From a rather weak and intermittent appeal for aid from the federal government to remove the snags and a few barriers from the navigable rivers, the plan of improvement has thus grown until it includes a great comprehensive system. The early demand was satisfied with the appropriation of a few thousands of dollars annually. The present demands require millions for their execution. Since the interest is spread over such a large area, since the forces favoring improvements are so well organized, and since the great political parties are pledged to an extensive system of betterments, we may expect to see the appropriations increase. The program itself appears to be complete. But great new problems are presented, namely, how to correlate the different elements of the system—how to adjust the expenditures among the different items so as to obtain the best results.

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<sup>1</sup> Cf. Report of the 1910 Committee on Agriculture on *Conservation of Navigable Rivers*, House Report No. 1036, 61st Cong., 2d sess., also *Preliminary Report of the United States National Waterways Commission*, Senate Doc. No. 301, 61st Cong., 2d sess.

<sup>2</sup> *Annals of Amer. Acad. Pol. and Soc. Sci.*, XXXI, 7.